UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

JUN 25 2012

Ref: 8EPR-N

Mr. Craig Bobzien, Forest Supervisor
Black Hills National Forest
ATTN: MPBRP Comments
1019 N. 5th Street
Custer, SD 57730

RE: EPA Comments on Draft Environmental Impact Statement, Mountain Pine Beetle Response Project, CEQ #20120137

Dear Mr. Bobzien:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4321, *et seq.*, and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609, the U.S. Environmental Protection Agency Region 8 (EPA) has reviewed the May 2012 Draft Environmental Impact Statement (DEIS) for the Mountain Pine Beetle Response Project. This DEIS was prepared by the U.S. Department of Agriculture Forest Service (USFS) Black Hills National Forest to analyze potential environmental impacts associated with the project's proposed vegetation treatments. These treatments are intended to reduce the threat to ecosystem components, including forest resources, from the existing mountain pine beetle (MPB) epidemic and to help protect local communities and resources from large scale wildfire by reducing hazardous fuels.

The Mountain Pine Beetle Response Project area encompasses the entire Black Hills National Forest in South Dakota and Wyoming, excluding the Norbeck Wildlife Preserve and Black Elk Wilderness. Proposed actions would be focused to treat stands at high risk for mountain pine beetle infestation and/or recently infested trees on approximately 242,000 acres. Numerous population areas, including Rochford, Custer, and Hill City, are located in the project area.

A summary of the three alternatives analyzed in the DEIS is as follows:

- Alternative A (No Action) - No vegetative management actions would occur.
- Alternative B – Vegetative management activities could occur as needed on 242,000 acres using integrated pest management techniques scattered across the project area to remove pockets of infested trees before beetles can disperse. Such techniques include cut and chunk; cut and chip; pile-burn; chemical treatment; and ground-based, cable, and helicopter commercial/non-

commercial timber harvest (48,400 acres) to remove recently infested trees and some associated non-infested trees. No new system or temporary roads would be required.

- Alternative C – Vegetative management activities could occur as needed on 248,000 acres using integrated pest management techniques, similar to Alternative B with the exception of a larger treatment area of ground-based, cable, and helicopter commercial/non-commercial timber harvest (124,000 acres) necessitating 250 miles of road construction (70 miles of new system roads and 180 miles of temporary roads). Also, this alternative includes the additional management technique of landscape level thinning in advance of large beetle infestations to reduce stand densities and risk of new infestations or fire.

In a September 7, 2011 letter, EPA provided scoping comments for this project. We appreciate that the USFS addressed many of our comments in the DEIS. As a result, our concerns with the May 2012 DEIS have been narrowed to these issues: (1) level of analyses, (2) aquatic resources and (3) adaptive management and monitoring. These concerns are the basis for EPA's EC-2 rating discussed at the conclusion of this letter.

(1) The site-specificity of analyses for each action alternative should be carefully considered to ensure that project impacts are adequately disclosed and mitigated for this forest-wide project.

The adaptive treatment techniques in Alternative B are all designed to be responsive to the beetle epidemic as it moves unpredictably across the forest. Due to the responsive nature of the management actions in this alternative, the techniques employed in Alternative B require the flexibility afforded by this project design and analysis. Additionally, the lack of road construction and inclusion of solid design criteria reduce the water quality concerns associated with Alternative B. With the few exceptions listed below under aquatic resources and adaptive management/monitoring, we find the site-specificity of this analysis to be appropriate for Alternative B activities and consistent with other USFS analyses for beetle response oriented projects.

In contrast to the techniques contemplated under Alternative B, the landscape level thinning element added in Alternative C would be used to treat stands displaying high fire or beetle risk characteristics. Preventive thinning is proposed for stands having high human or wildlife values that would be jeopardized by beetles or fire, including areas in the wildland-urban interface and important species habitat. Because these treatments are preventive rather than responsive, USFS currently has the ability to identify these stands and the appropriate treatment techniques based on current stand risk conditions and proximity to sensitive resources. We recommend the Final EIS (FEIS) include additional site-specific assessment of the 124,000 acres potentially available for landscape-level preventive thinning including identification of the following:

- location of each stand to be treated;
- cover type and stand conditions that present high risk;
- environmental resources potentially affected (e.g., aquatic resources, wildlife, threatened or endangered species, soils, recreation, air quality) and a prediction of impacts to each resource;

- amount of ground disturbing activity; and
- amount, type and specific location of road construction and associated impacts.

This information is important to allow an assessment of whether the proposed design criteria and best management practices will protect aquatic resources from loss of function from sedimentation and related impacts. In addition, EPA suggests USFS identify the circumstances under which thinning in these identified areas might not occur (e.g., high beetle activity in the stand, lack of sufficient resources, etc.). We note that EPA has consistently seen this type of site-specific analysis for projects designed to reduce forest vulnerability to beetles and fire for preventive thinning projects in the Black Hills and other forests. If preventive thinning is likely to be included in the selected alternative, it may be more timely and cost effective to include the site-specific information in this EIS, rather than tiering additional NEPA analyses as landscape thinning projects are needed.

(2) Aquatic resources in the project area are of critical importance, requiring evaluation and mitigation of associated impacts.

EPA considers protection of aquatic resources to be among the most important issues to be addressed in any NEPA analysis for vegetation management activities. Most treatments contemplated under the action alternatives (e.g., harvest, pile burn, chemical application, road construction) have the potential to adversely impact aquatic resources, including surface and ground waters, wetlands, streams, riparian areas, and their supporting hydrology. As noted in our scoping comments, we recommend USFS fully evaluate the alternatives by providing complete data and robust analyses of potential impacts.

Watersheds: We understand the USFS defines Class 1 watersheds as those that exhibit *high* geomorphic, hydrologic, and biotic integrity relative to their natural potential condition, while Class 2 watersheds exhibit *moderate* integrity relative to their natural potential condition. To focus the level of analysis for this forest-wide project, the DEIS includes a direct/indirect impacts analysis and disclosure of information pertinent to 15 watersheds based on potential for the project to cause transition from Class 1 to Class 2 watershed classifications. Data presented for these select 15 watersheds include watershed condition class, acreage of proposed treatments, treatment percentage of watershed acreage, and Clean Water Act Section 303(d) impaired waterbodies. In addition, cumulative impacts to watershed classification and impaired waterbodies were assessed for seven watersheds based on potential treatment acreage occurring in 25% or more of the watershed's total acreage. Data presented for these watersheds include watershed condition class, acreage of proposed treatments, and treatment percentage of watershed acreage. There is overlap for one watershed that was assessed in both the direct/indirect impacts analysis and the cumulative impacts analysis. Therefore, a total of 21 watersheds were assessed in some fashion for project impacts.

The USFS concludes that adherence to project design criteria, Forest Plan Standards & Guidelines, and Watershed Conservation Practices will prevent adverse direct, indirect and cumulative impacts to watershed condition classification resulting from the action alternatives. We recommend the FEIS more specifically identify potential project impacts and the specific guidelines, practices and/or project design criteria that will prevent those impacts. This would include those measures that will protect the impaired parameters of the Clean Water Act Section 303(d) listed waterbodies (e.g., temperature, dissolved

oxygen, pH, etc.) particularly since proposed treatments could occur in the watershed influence zone of impaired streams. In addition, information regarding past, present and future actions for these watersheds is provided in the cumulative effects summary tables (Tables 3-7 through 3-13). We recommend that the entries for Alternatives B and C in these tables be expanded to include the full acreage of all proposed management techniques in addition to the commercial harvest acreage.

We understand that the remaining watersheds of the 112 watersheds in the project area were analyzed but not included in the DEIS data presentation due to minimal impacts resulting from proposed treatments. We recommend the FEIS clarify this point and note that the analyses for all watersheds are contained in the project file.

Wetlands and Riparian Areas: The DEIS identifies wetland types and acreage within potential treatment areas. To more fully inform the reader and disclose potential impacts, we recommend the FEIS include a map showing the locations of these wetlands and/or a table that identifies the wetland acreage by watershed. In addition, we recommend the text of the FEIS include a summary or examples of the project design criteria (as identified in Appendix B) that will ensure that riparian areas, wetlands and springs will not be impacted by project activities.

Water Quality: The DEIS provides a qualitative assessment of impacts to water quality by disclosing potential project impacts to streams and watershed influence zones from sediment and stream temperature effects (due to removal of shading). Although mileage of streams and acreage of watershed influence zone in potential treatment areas are provided, we recommend the FEIS include maps identifying the locations of these resources to enable the reader to more fully understand the potential for impacts from this forest-wide project.

We appreciate the efforts to reduce water quality risks from chemical treatments, including minimizing chemical applications appropriately. For more thorough disclosure, we recommend the FEIS include an expanded discussion regarding the potential risks from chemical treatments and a summary (or examples) of the mitigation measures that will be utilized as required through adherence to Forest Plan Standards and Guidelines, Watershed Conservation Practices, Best Management Practices, and National Pollution Discharge Elimination System guidance.

In addition, for streams with a coldwater designation, we recommend consideration of specific measures to reduce impacts to stream temperature. Such measures may include limiting removal of trees in areas where no other trees or shrubs provide stream shading along with tree planting or cattle exclosures designed to restore vegetative shade to impacted streams. In particular, the Park Creek Watershed would benefit from such mitigation given that it is identified as having the highest percentage of potential treatment acres in the watershed influence zone and a temperature impaired stream (Bear Butte Creek).

Design Criteria, Mitigation Measures and Monitoring: We support the list of project design criteria, mitigation measures and monitoring requirements, as identified in Appendix B, to ensure that project activities do not adversely impact aquatic resources. We recommend expanding the list as follows:

- Develop design criteria and/or mitigation measures to protect reservoirs, particularly if treatments could occur adjacent to these important resources. Such measures may include operational requirements for treatments implemented directly adjacent to reservoirs and/or monitoring impacts to reservoir water quality from project activities.
- Specify steps to protect range improvements (fencing, exclosures, etc.) that protect water quality and aquatic habitat.

(3) A detailed adaptive management strategy and monitoring plan are critical to the success of this project and should be fully disclosed.

The Mountain Pine Beetle Response Project provides for an adaptive treatment process to be implemented as necessary over the next 5-7 years depending on where beetle infestations occur and what integrated pest management techniques are most appropriate at the time. In its January 21, 2011guidance on the appropriate use of mitigation in environmental assessments and environmental impact statements under NEPA, The Council of Environmental Quality noted that adaptive management can help an agency take corrective action if mitigation commitments originally made in NEPA and decision documents fail to achieve projected environmental outcomes and there is remaining federal action. To ensure USFS achieves desired environmental outcomes (i.e., to reduce the threat to ecosystem components from existing MPB epidemic and to help protect local communities and resources from large scale wildfire by reducing hazardous fuels) while also protecting other resources, EPA recommends the FEIS identify the features of an effective adaptive management plan for this project, including the following:

- Decision tree with clear objectives to guide future decisions;
- Specific decision thresholds with identified indicators for each impacted resource;
- Targets that specify a desired future condition;
- Trends specifying a desired change relative to the current condition;
- Monitoring plan with protocols to assess whether thresholds are being met; and
- Firm commitment to use monitoring results to modify management actions as necessary.

EPA recommends the FEIS describe how and with what resources the USFS will conduct the essential monitoring necessary under an adaptive management plan to ensure the project is meeting objectives and mitigating impacts as predicted. It may be reasonable to consider provisions for reducing treatment acreage or omitting specific locations if unanticipated resource impacts occur or monitoring does not indicate progress toward desired conditions. For a good example, we suggest you refer to the October 2010 Black Hills National Forest Mystic Range Project Adaptive Management and Monitoring Plan, which identifies monitoring sites, desired conditions, frequency, trigger points, and specific management changes if warranted based on monitoring.

We recommend the discussion of monitoring requirements include details regarding the timing of monitoring for water quality. Timely monitoring is particularly important given the high resource value and broad scale of the project area. In addition, we recommend discussion of the general timing of adaptive management implementation and effectiveness monitoring. A firm commitment to effectiveness monitoring is desirable given that adaptive management cannot be employed without the

full implementation of its associated monitoring schedule. Given the 5-7 year timeframe for this project, the inclusion of requirements for an interdisciplinary team to have scheduled reviews of the adaptive management feedback loop would provide the opportunity for timely assessment of whether thresholds are being met and any need for specific actions if thresholds are not being met.

EPA's Rating

Consistent with Section 309 of the CAA, it is EPA's responsibility to provide an independent review and evaluation of the potential environmental impacts of this project. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action, EPA is rating this DEIS as Environmental Concerns – Insufficient Information (EC-2). The "EC" rating indicates that EPA review has identified environmental impacts that need to be avoided in order to fully protect the environment. The "2" rating indicates that EPA has identified additional information, data, analyses, or discussion that we recommend for inclusion in the FEIS. Because a preferred alternative was not identified in the DEIS, we are rating the DEIS based on Alternatives B and C (we do not rate the no action alternative). A full description of EPA's rating system is enclosed.

Although Alternatives B and C received an EC-2 rating in this review, we do not view them as equivalent. The difference in proposed new road construction mileage between the two action alternatives is substantial – 0 miles under Alternative B and up to 250 miles under Alternative C (70 miles of new system roads and 180 miles of temporary roads). Although design criteria were developed to protect aquatic resources from road construction impacts and it is the USFS's intent to close all temporary and newly constructed system roads after harvest completion, the difficulty of eliminating impacts and ensuring complete closure of these roads may result in long-term sediment loading to aquatic resources compared to Alternative B.

We hope that our comments regarding level of analyses, aquatic resources and adaptive management and monitoring will assist you in further disclosing and reducing the environmental impacts of this project. We appreciate the opportunity to review and comment on this DEIS. If we may provide further explanation of our comments, please contact me at 303-312-6925, or your staff may contact Amy Platt at 303-312-6449.

Sincerely,

for Suzanne J. Bohan
Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation

Enclosure

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new, reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.